

REMARKS

United States Serial No. 10/525,189 is a national phase application of PCT/GB03/03503. Claims 1-22 were canceled and claims 23-43 were added by the Preliminary Amendment filed on February 22, 2005. Claims 42 and 43 were then canceled by the Response filed on November 17, 2008. Claim 38 is amended by the present Response. Applicants respectfully request reconsideration and allowance of claims 23-41 in view of the amendment and remarks set forth herein.

35 U.S.C. §112

Claim 38 was rejected under 35 U.S.C. §112, second paragraph. It is alleged that claim 38 is indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. It is specifically alleged that the phrase “highly surface active water soluble emulsifier” is unclear. Without conceding to the rejection, and merely to expedite allowance of the pending claims, Applicant has deleted the word “highly” from claim 38. In view of the amendment to claim 38, Applicant respectfully requests that the rejection be withdrawn.

35 U.S.C. §103

Claims 23-33, 37 and 39-41 are rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Delany (EP 147483) and Brooker (US 2001/0038872A1) for the reasons set forth in the Office Action at Page 2 through Page 6. Applicant respectfully traverses this rejection.

By way of background, ice cream is traditionally manufactured by first preparing an oil-in-water emulsion by blending together fats and other aqueous ice cream ingredients. The oil-in-water emulsion is homogenised under pressure to form droplets of fat that are stabilised by an interfacial layer of adsorbed milk proteins. The homogenised oil-in-water emulsion

subsequently undergoes an ageing process in a holding tank for a period of time. During the ageing process the fat is crystallised. The emulsion then undergoes an aeration process by which air is incorporated into the oil-in-water emulsion and the aerated emulsion is hardened by freezing at very low temperatures. The ageing process is critical to prior art ice cream manufacturing, because only after the fat has crystallised can the fat droplets stabilise the air bubbles that have been introduced into the emulsion during the aeration process.

The present application is directed to a process for manufacturing ice cream that uses precrystallised particles of edible fat to prepare the oil-in-water emulsion. By utilizing precrystallised fat particles to prepare the oil-in-water emulsion, there is no need to employ the conventional time-consuming and expensive homogenization and ageing steps required in traditional ice cream manufacturing processes.

The Delany reference follows the traditional ice cream manufacturing process. Delany employs the usual process steps of forming an oil-in-water emulsion of ice cream ingredients and subjecting the emulsion to the typical homogenisation, pasteurisation, ageing and hardening steps. The critical aspects of the Delany reference are the selection of an oil having a Solid Fat Index (SFI) at 70°F of at least 25, and the steps of homogenising and ageing the oil-in-water emulsion under controlled conditions to achieve an emulsion of fat globules having a certain particle size and size distribution. See Delany at Page 5, Lines 20-28; Page 6, Lines 4-8; Page 8, Lines 28-30; Page 10 Lines, 33-36, Page 19, Lines 25-29; and Page 22, Lines 1-18 (claim 1)).

The Office Action expressly concedes that the Delany reference does not disclose the use of precrystallised edible fat particles to form the oil-in-water emulsion or gasifying/hardening the oil-in-water emulsion without first subjecting the emulsion to the homogenisation or ageing processes. See Office Action at Page 3, Lines 19-27. Nevertheless, the Office Action alleges that it would have been obvious to one having ordinary skill in the art at the time of the invention to use the precrystallised fat particles disclosed by Brooker to form the oil-in-water emulsion of Delany. The alleged motivation to combine Delany and Brooker is that Delany teaches that it is

desirable to have small crystallised particles of fat in the ice cream and because Brooker teaches a method of forming a precrystallised fat with minimal crystallize [sic] size.

"It is impermissible to use the claimed invention as an instruction manual or a "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious." This court has previously stated that "one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fritsch*, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992). Applicants presently claimed process is the first in the ice cream manufacturing art to suggest the use of a cryogenically precrystallised fat particle to prepare the initial emulsion of ingredients. There is absolutely no teaching, suggestion or motivation in Delany to utilize any means for processing the oil-in-water emulsion other than the traditional homogenising and ageing processes. Moreover, the properties of a fat being "precrySTALLISED" and having "small crystallised particles" are completely independent of one another. That is, not all fat particles that are precrystallised, cryogenically or otherwise, would necessarily exhibit the crystal size desired by Delany. There are alternative processes by which to achieve crystallised fat particles having the particle size desired by Delany and, therefore, one having ordinary skill in the art would not be automatically motivated to use the cryogenically precrystallised fat particles of Brooker to the exclusion all other processes inexistence for preparing crystallised fat globules.

As expressly disclosed in Delany, its "critical" process steps are selecting oil having a particular Solid Fat Index or "SFI", and homogenising and ageing an emulsion containing the oil to render fat globules to have a certain particle size and size distribution. The Delany reference specifically discloses, "It has quite unexpectantly been found that the selection and processing of the fat component during the preparation of the aforementioned aerated frozen food products are critical elements in achieving the unique stability of this invention." See Delany at Page 7, Lines 15-19. Using the precrystallized fat particles of Brooker in the process of Delany would render the critical process steps of the Delany no longer useful for their intended purpose. *Eisai v. Dr. Reddy's*, 533 F.3d 1353, 87 USPQ.2d 1452 (Fed. Cr. 2008); See Also In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). ("If the proposed modification would render the prior art

invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification."). Eliminating the steps of selecting an oil having the desired SFI, preparing an emulsion using uncrystallised oil, homogenising the emulsion, and ageing the emulsion would serve to render the invention of Delany unsuitable for its intended purpose.

"When the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious." *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, 82 USPQ2d 1385 (2007), (Slip. Op. at 12). The critical process steps that define the Delany process over the prior art ice cream manufacturing processes are the selection of an edible oil having a particular Solid Fat Index, and the homogenizing and ageing of an emulsion containing the edible oil to achieve certain fat globule size and size distribution. Again, Delany unequivocally teaches, "It has quite unexpectedly been found that the selection and processing of the fat component during the preparation of the aforementioned aerated frozen food products are critical elements in achieving the unique stability of this invention." See Delany at Page 7, Lines 15-19. [Emphasis Added]. Thus, Delany considers the specific homogenising and ageing processes to be indispensable to the formation of the desired fat particle size. There is no disclosure, teaching, or suggestion whatsoever in Delany to exclude the either the homogenising or ageing steps from its ice cream manufacturing process, or that some other process would be successful in achieving small fat particle size. Moreover, using the precrystallised fat particles of Brooker would actually teach away from the employing the "critical elements" of the Delany process (ie, the oil selecting, homogenizing, and ageing steps).

It is also alleged in the Office Action that it would have been obvious to one having ordinary skill in the art at the time of the invention to precrystallise the fat prior to or after blending with other ice cream ingredients, depending on which was more convenient. As a threshold matter, if uncrystallised fat is blended with other ice cream ingredients to form an emulsion and the emulsion is subsequently homogenised and aged to crystallize the fat, the fat cannot be considered to be "precrySTALLISED". The term "precrySTALLISED" refers only to fat that has been crystallised prior to blending with the other ice cream ingredients.

The Office Action further alleges that it would have been obvious to precrystallise the fat if the equipment for precrystallising the fat is in a different location from the other ice cream ingredients and ice cream processing equipment. A traditional ice cream manufacturing facility includes the common ice cream processing equipment for preparing the emulsion, homogenising, pasteurising, ageing, and hardening the emulsion. Because the use pre-crystallised fat particles in an ice cream manufacturing process has not heretofore been proposed or practiced in the art, there would be no equipment for “precrySTALLISING” the fat particles located within a traditional ice cream manufacturing facility. As there would be no dedicated equipment for precrystallising fat particles, such non-existent equipment could not be contained at a different location from the other traditional ice cream manufacturing equipment. Consequently, the alleged motivation to combine Delany and Brooker fails.

Claims 24-36 and 38 were rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Delany (EP 147483), Brooker (US 2001/0038872A1) and Jonas (US 4012533) for the reasons set forth from page 6, line 6 through page 7, line 2. Applicant respectfully traverses this rejection.

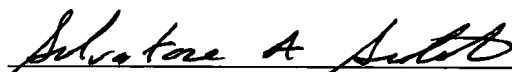
The combination of Delany and Brooker is not proper, for at least the reasons that Delany teaches away from using precrystallised fat particles to form an emulsion of ice cream ingredients, and because excluding the oil selecting, homogenising and ageing process steps from the Delany process would render the overall Delany process unsuitable for its intended purpose. The use of a particular emulsifier based upon the disclosure of the Jonas reference does not render the combination of Delany and Brooker proper. Applicants therefore respectfully request that the rejection of claims 24-36 and 38 be withdrawn.

U.S. Patent No. 5,098,731 to Feldpausch, not having been relied upon in the Office Action, is not thought to require further remarks.

All issues raised in the Office Action are believed to have been addressed. In view of the amendment to claim 38 and the remarks set forth herein above, Applicants respectfully request that the rejections under 35 U.S.C. §112, and §103(a) be withdrawn, and that a formal notice of allowance be issued for claims 23-41.

Should the Examiner have any questions about the above remarks, the undersigned attorney would welcome a telephone call.

Respectfully submitted,



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